

Amendments to the Claims:

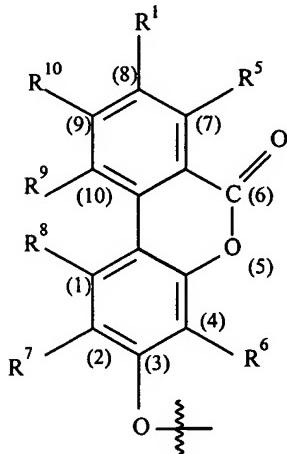
This listing of claims will replace all prior versions, and listings, of claims in this Application:

Listing of Claims:

1. (Currently amended) A composition of isolated dibenzo-alpha-pyrone chromoproteins (DCPs) comprising:

- a. dibenzo-alpha-pyrone or their derivatives;
- b. phosphocreatine;
- c. chromo-peptides of molecular weights of about \leq 2 KD; and
- d. lipids having fatty acyl esters of glycerol.

2. (Currently amended) A composition according to claim 1 comprising wherein said dibenzo-alpha-pyrone have the structure of formula (I)



(I)

wherein:

R¹ is selected from the group consisting of H, OH, O-acyl, and O-amino-acyl; and

R⁵, R⁶, R⁷, R⁸, R⁹, and R¹⁰ are independently selected from the group consisting of H, OH, O-acyl, O-amino-acyl, and fatty acyl groups.

3. (Original) A composition according to claim 1 wherein said phosphocreatine is attached to the 3- or 8-position of said dibenzo-alpha-pyrone via an ester linkage.

4. (Original) A composition according to claim 1 wherein said chromo-peptides further comprise:

one or more amino acids;
carotenoids; and
indigoids.

5. (Currently amended) A composition according to claim 1 ~~wherein said also comprising chromo-proteins having have~~ a molecular weight of about 2 to about 20 KD.

6. (Original) A composition according to claim 5 wherein said chromo-proteins comprise of one or more amino acids selected from the group consisting of methionine, arginine, glycine, alanine, threonine, serine, proline, and hydroxyproline.

7. (Original) A composition according to claim 1 wherein said chromo-peptides comprise of a carotenoid moiety, said carotenoid moiety is astaxanthin and equivalents.

8. (Original) A composition according to claim 1 wherein said lipids are saturated or unsaturated fatty acids having a carbon chain length of about C₁₄ to C₂₄.

9. (Original) A composition according to claim 8 wherein said polyunsaturated fatty acid substituents have a degree of unsaturation of one to six.

10. (Original) A composition according to claim 9 wherein said polyunsaturated fatty acids are eicosapentaenoic acid and / or docosahexaenoic acid.

11. (Original) A composition according to claim 1 wherein said DCPs further comprise iron, calcium, copper, zinc, magnesium, vanadium, and/or metal ions ranging from about 1 to about 500 ppm levels.

12. (Original) A composition according to claim 1 wherein said DCPs further comprise low molecular weight ligands.

13. (Original) A skin care, hair care, pharmaceutical, or nutritional or veterinary formulation comprising the composition of claim 1 present therein in an amount of about 0.05 to about 50% by weight.

14. (Original) A skin care or protection formulation according to claim 13 where said skin care or protection formula is in the form of a lotion, cream, gel or spray, and said composition is present in an amount of about 0.05 to about 5% by weight.

15. (Original) A pharmaceutical formulation according to claim 13 wherein said pharmaceutical formulation is in the form of a tablet, syrup, elixir or capsule.

16. (Original) A nutritional formulation according to claim 13 wherein said nutritional formulation contains about 0.5 to about 30% of said composition.

17. (Original) A skin care or protection formulation according to claim 14, further comprising a cosmetically acceptable carrier and at least one cosmetic adjuvant selected from the group consisting of sunscreens, antioxidants, preservatives, self-tanning agent, perfumes, oils, waxes, propellants, waterproofing agents, emulsifiers, thickeners, humectants, and emollients.

18. (Original) A pharmaceutical formulation according to claim 15 further comprising pharmaceutically acceptable carriers.

19. (Original) A nutritional formulation according to claim 16 further comprising nutritionally acceptable carriers.

20. (Canceled).

21. (Canceled).

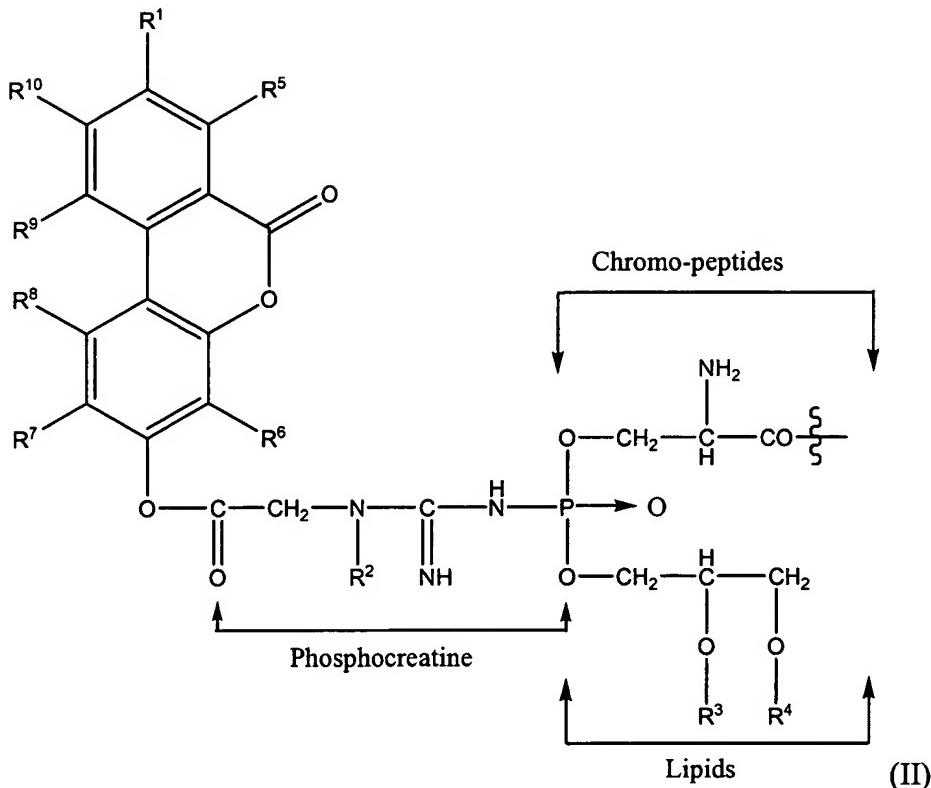
22. (Canceled).

23. (Canceled).

24. (Canceled).

25. (Canceled).

26. (Currently amended) A composition comprising of isolated dibenzo-alpha-pyrone chromoproteins (DCPs) of formula (II) (A):



wherein:

R^1 is selected from the group consisting of H, OH, O-acyl, and O-amino-acyl;

R^2 is selected from H and CH_3 ;

R^3 is selected from H and fatty acids;

R^4 is selected from H and fatty acids; and

R^5 , R^6 , R^7 , R^8 , R^9 , and R^{10} are independently selected from the group consisting of H, OH, O-acyl, O-amino-acyl, and fatty acyl groups.

27. (Original) A composition according to claim 26 wherein said DCPs further comprise iron, calcium, copper, zinc, magnesium, vanadium, and/or metal ions ranging from about 1 to 500 ppm levels.

28. (Original) A composition of claim 27 wherein said DCPs further comprise low molecular weight ligands.

29. (Original) A skin care, hair care, pharmaceutical, or nutritional formulation comprising the composition of claim 26 present therein in an amount of about 0.05 to 50% by

weight.

30. (Canceled).
31. (Canceled).
32. (Canceled).
33. (Canceled).
34. (Canceled).
35. (Canceled).
36. (Canceled).
37. (Canceled).
38. (Canceled).